



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/531,264

02/17/2006

Joel Marsal

Q87433

4665

23373 7590 05/14/2008
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

YEE, DEBORAH

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

05/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,264	Applicant(s) MARSAL ET AL.	
	Examiner Deborah Yee	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/13/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 recites "said first cooling operation...." yet its parent claim 1 does not have sufficient antecedent basis for this limitation. To overcome rejection, it is recommended to change the dependency of claim 3 from "claims 1 and 2" to --claim 2--.

Claim Objections

3. Claims 4 to 11 are objected to under 37 CFR 1.75(c) as being improper because they depend from other multiple dependent claims. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1, 2, and 4 to 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,171,413 (Funakawa et al.).
6. Funakawa et al. in claims 1 to 20 disclose an analogous steel alloy sheet processed in essentially the same manner as claimed by Applicants comprising the following steps: melting and casting steel alloy to provide a slab; hot rolling slab to form sheet with a finishing temperature of an Ar₃ point or more; coiling sheet at a temperature of 650°C or less ; cold rolling with a reduction rate of 30 to 90%; continuous annealing at

a temperature $< 800^{\circ}\text{C}$ for 60 seconds or more (see lines 40 to 49 in column 23); and skin pass rolling at 2% or less (see lines 60-63 in column 17).

7. Moreover, Funakawa et al. teaches continuous annealing at $<800^{\circ}\text{C}$ for 60 seconds or more which would encompass and therefore suggest Applicants' two-step anneal temperature of $750\text{-}850^{\circ}\text{C}$ and $380\text{-}500^{\circ}\text{C}$ recited by claim 2.

8. In addition, Funakawa et al. in claims 1 to 20 teach a steel alloy having constituents whose wt% ranges overlap or closely approximate those recited by the claims; such similarities in wt% ranges establish a prima facie case of obviousness since it would be obvious for one skilled in the art to select the claimed alloy wt% ranges over the present invention because the same utility is taught (hot dip galvanizing parts for automotive components, see lines 10 to 15 in column 3 and lines 59-60 in column 17).

9. It should also be noted that similar to present invention, some of the specific prior art examples when calculated, meet the B/N ratio of 0.64-1.60 and Mn/Si ratio of 4 to 15, and have tensile strength within the range of 320-460 MPa. Although prior art does not disclose yield strength 260 to 360 MPa or $\text{BH2} > 40 \text{ MPa}$, preferably $> 60 \text{ MPa}$, and yield plateau $\leq 0.2\%$ as recited by claims 9 and 10, such properties would be expected since composition and process of making are closely met, and in absence of proof to the contrary.

10. With regard to claim 11, Funakawa et al. on lines 59-60 in column 17 teaches steel part can be painted and baked.

11. Claims 9 to 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 2002-12920 (JP'920).

12. The English abstract of JP'920 teaches bake hardening steel sheet having a composition with constituents whose wt% ranges overlap those recited by the claims; such overlap in wt% ranges establishes a prima facie case of obviousness since it would be obvious for one skilled in the art to select the claimed alloy wt% ranges over the present invention because the same utility is taught (coating and baking steel steels with less aging deterioration).

13. More specifically, steel H in table on page 7 has a B/N = 0.7368 and is within the claimed B/N ratio between 0.64-1.60. In addition, the prior art steel examples in the table on page 9 exhibit tensile strength, yield strength and BH values that are within the ranges recited by claims 9 and 10.

14. With regard to claim 11, JP'920 teaches a painted and baked sheet part.

15. Even though prior product is made by a process different than recited by the claims, such would not be a patentable difference. Note that in a product-by-process claims, the product determines that patentability and not its process limitations.

Applicants will have the burden to show that the prior art product does not necessarily or inherently possess the characteristics of the claimed product, see MPEP 706.03(e).

16. Claims 1, 2 and 4 to 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO-A02/059384 (WO'384) in view of European patent 870848(EP'848), which were cited by Applicants in IDS dated April 13, 2005.

17. WO'384 discloses a steel sheet alloy and its process of making, which closely meet the recited claims.

18. Even though annealing time range of less than 15 minutes as recited by claim 1 or the 2-step annealing recited by claim 2 are not taught by prior art, such would not be a patentable difference. Note that continuous annealing for a time period of less than 15 minutes or with 2-steps are standard and widely used in the present technical field of bake hardening steel sheets, as shown for example by EP'848, page 5, lines 34-56. Therefore it would be matter of choice well within the skill of the artisan to select and incorporate such annealing limitations to the process of EP'848 in view of the secondary teaching.

19. In addition, WO'384 discloses specific examples in tables on pages 8 and 9 that meet the claimed composition, tensile strength and yield strength . Even though BH2 value of >40MPa and preferably >60 MPa and a yield plateau of less than or equal to 0.2% as recited by claims 9 and 10 are not taught by prior art, such properties would be expected since composition is met and process of making is closely met.

20. The unapplied references have been cited to further depict the state of the art in cold rolled steel sheet alloys.

Allowable Subject Matter

21. Claim 3 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Art Unit: 1793

22. The following is a statement of reasons for the indication of allowable subject matter: The art of record does not teach or fairly suggest the process for manufacturing bake hardening steel sheet, as recited by claim 3, wherein the continuous annealing heat treatment comprises the following step: reheating the steel until it reaches a temperature between 750 and 850°C; isothermal soak; first cooling down to a temperature between 380 and 500°C at a slow cooling rate of less than 10°C/s; isothermal soak; and then a second cooling operation at a rapid cooling rate between 20 and 50°C /sec down to ambient temperature.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/
Primary Examiner
Art Unit 1793

/DY/